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Hot isostatic pressure synthesis of MgB2 from sonochemically modified precursors[1] BRETT A. MCCARTY, AMANDA TOOMEY, RUSLAN PROZOROV, Ames Laboratory and Department of Physics & Astronomy, Iowa State University, Ames IA 50011 — Close to theoretical density bulk MgB2 was obtained by hot isostatic pressing (HIP) from precursors subject to high-intensity ultrasonic treatment. Comparative results obtained on unmodified and sonicated boron of various purities (from 80% to 99%) and in combination with various phases of magnesium are reported. Samples made from sonicated precursors showed improvements in superconducting properties without affecting Tc. Analysis of magnetization, SEM images, and XRD will be presented.

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Brett A. McCarty
mccartyb@iastate.edu
Ames Laboratory and Department of Physics & Astronomy
Iowa State University, Ames IA 50011

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